

**Claims:**

1           1.       A method of providing wireless communications within a premises, comprising:  
2           operating a first wireless access point within the premises to support wireless  
3           communications at a first data rate in a first cell having a first size within the premises;  
4           adding and operating a second wireless access point to support wireless communications  
5           at a second data rate in a second cell within the premises; and  
6           adjusting operation of the first wireless access point by increasing the data rate above the  
7           first data rate and correspondingly reducing the size of the first cell.

1           2.       The method of claim 1, further comprising:  
2           the adjusting operation of the first wireless access point comprising reducing the size of  
3           the first cell so that the first and second cells substantially cover the entire premises and so that  
4           the first and second wireless access points both operate at a data rate that is greater than the first  
5           data rate.

1           3.       The method of claim 2, further comprising:  
2           suspending operation of the second wireless access point while communication demands  
3           are reduced; and  
4           adjusting operation of the first wireless access point to the first data rate in the first cell at  
5           the first size while communication demands are reduced.

1           4.     The method of claim 2, further comprising:  
2           coupling the first and second wireless access points together;  
3           the first wireless access point monitoring communications within the premises and  
4     requesting that the second wireless access point suspend communications while communication  
5     demands are reduced; and  
6           the first wireless access point resuming operation at the first data rate in the first cell at  
7     the first size while communication demands are reduced.

1           5.     The method of claim 1, further comprising:  
2           adding and operating a plurality of second wireless access points so that each supports  
3     wireless communications at a second data rate in a corresponding plurality of second cells within  
4     the premises; and  
5           adjusting operation of the first wireless access point by increasing the data rate above the  
6     first data rate and correspondingly reducing the size of the first cell below the first size.

1           6.     The method of claim 5, further comprising:  
2           the adjusting operation of the first wireless access point comprising reducing the size of  
3     the first cell so that the first and plurality of second cells substantially cover the entire premises  
4     and so that the first and plurality of second wireless access points each operate at a data rate that  
5     is greater than the first data rate.

1           7.     The method of claim 6, further comprising:  
2           suspending operation of each of the plurality of second wireless access points while  
3           communication demands are reduced; and  
4           adjusting operation of the first wireless access point to the first data rate in the first cell at  
5           the first size while communication demands are reduced.

1           8.     The method of claim 6, further comprising:  
2           coupling the first and plurality of second wireless access points together;  
3           the first wireless access point monitoring communications within the premises and  
4           requesting that each of the plurality of second wireless access point suspend communications  
5           while communication demands are reduced; and  
6           the first wireless access point resuming operation at the first data rate in the first cell  
7           while communication demands are reduced.

1           9.     A wireless network providing wireless communication within a premises, the  
2 wireless network comprising:  
3           a plurality of interconnected wireless access points;  
4           each of the plurality of wireless access points providing wireless communications within  
5 a corresponding cell of a plurality of cells spaced to provide wireless coverage throughout the  
6 premises; and  
7           a size of at least one cell of the plurality of cells that is dynamically adjustable based  
8 upon cell communication characteristics.

1           10.    The premises based wireless network of claim 9, an operating data rate of at least  
2 one of the wireless access points being selectively adjusted to alter the size of a corresponding  
3 cell.

1           11.    The premises based wireless network of claim 9, an operating data rate of at least  
2 one of the wireless access points being selectively increased to increase data throughput  
3 capability within a corresponding cell.

1           12.    The premises based wireless network of claim 9, further comprising:  
2           the data rate of a first wireless access point being selectively adjusted to increase the data  
3 throughput capability and to reduce the size of the corresponding cell; and  
4           the data rate of a second wireless access point, neighboring the first wireless access point,  
5 being selectively adjusted to increase the size of a corresponding cell.

1           13.     The premises based wireless network of claim 9, further comprising:  
2           each of the plurality of wireless access points capable of operating according to first  
3 protocol at a first data rate; and  
4           at least one of the plurality of wireless access points comprising a dual mode wireless  
5 access point capable of operating according to a second protocol that is substantially compliant  
6 with the first protocol, but that operates at a relatively lower data rate and within a relatively  
7 larger cell size.

1           14.     The premises based wireless network of claim 13, further comprising:  
2           at least one wireless terminal communicating with the at least one of the plurality of  
3 wireless access points within a corresponding cell according to the second protocol;  
4           a roaming wireless terminal that can only operate according to the first protocol that  
5 enters the cell corresponding to the dual mode wireless access point; and  
6           the dual mode wireless access point establishing communication with the roaming  
7 wireless terminal according to the first protocol.

1           15.     The premises based wireless network of claim 13, further comprising:  
2           a roaming wireless terminal that can only operate according to the first protocol that  
3 enters the cell corresponding to the dual mode wireless access point; and  
4           the at least one the plurality of wireless access points adjusting the corresponding cell to  
5 operate according to the first protocol.

1           16.     The premises based wireless network of claim 15, further comprising:

the at least one the plurality of wireless access points further communicating with the other of the plurality of wireless access points to adjust operation to the first protocol.

17. The premises based wireless network of claim 9, further comprising:  
at least one of the plurality of wireless access points being selectively dormant such that it does not provide wireless communications; and  
at least one other of the plurality of wireless access points adjusting its data rate and increasing a corresponding cell size to provide wireless communications in portions of the premises that were previously covered by a dormant wireless access point.

18. The premises based wireless network of claim 9, wherein:  
the at least one selectively dormant wireless access point monitoring communications within a previously active corresponding cell; and  
the at least one selectively dormant wireless access points becoming active to provide wireless communications within a corresponding cell when monitored communications exceed a threshold level.